To the Claims :

Please amend the claims as indicated hereafter.

Claim 1. (original) A method of fabricating a semiconductor laser device, comprising the steps of:

providing an epitaxial structure;

forming a first mask layer over the epitaxial structure to define a protrudent area of a ridge structure;

forming a conformal second mask layer over the epitaxial structure to cover the first mask layer;

forming a third mask layer over the second mask layer to expose a portion of the second mask layer above the first mask layer;

removing the exposed second mask layer;

removing a portion of the epitaxial structure using the first mask layer and the third mask layer as an etching mask to form the ridge structure;

removing the third mask layer and the remaining second mask layer;

forming an insulating layer over the epitaxial structure;

removing the first mask layer to expose the top surface of the protrudent area; and

forming a conductive layer over the ridge structure, wherein the conductive layer contacts with the top surface of the protrudent area.

Claim 2. (original) The method of claim 1, wherein the step of removing a portion

of the epitaxial structure comprises performing a reactive ion etching operation.

Claim 3. (original) The method of claim 2, wherein the gaseous etchant used in the reactive ion etching operation comprise argon, method, chlorine and helium ($Ar/CH_4/Cl_2/He$).

Claim 4. (original) The method of claim 1, wherein the material constituting the insulating layer comprises silicon oxide.

Claim 5. (original) The method of claim 1, wherein the step of removing the first mask layer comprises etching the epitaxial structure with a boiling mixture of nitric acid and hydrochloric acid solution.

Claim 6. (original) The method of claim 1, wherein the material constituting the first mask layer, the second mask layer and the third mask layer is selected from a group consisting of silicon nitride, silicon oxide, metal, single photoresist layer, multi-layered structure and various combinations of the above.

Claim 7. (original) The method of claim 1, wherein the material constituting the conductive layer comprises P-type nickel/gold.

Claim 8. (original) A method of fabricating a semiconductor laser device, comprising the steps of:

providing an epitaxial structure having an N-type electrode area and a P-type electrode area;

forming a first mask layer over the epitaxial structure to define a protrudent area of a ridge structure within the P-type electrode area and an N-type ohmic contact metal area within the N-type electrode area;

forming a conformal second mask layer over the epitaxial structure to cover the first mask layer;

forming a third mask layer over the second mask layer to expose a portion of the second mask layer above the first mask layer within the P-type electrode area;

removing the exposed second mask layer;

removing a portion of the epitaxial structure using the first mask layer and the third mask layer within the P-type electrode area as an etching mask to form the ridge structure inside the P-type electrode area;

removing the third mask layer and the remaining second mask layer;

forming an insulating layer over the epitaxial structure to cover the ridge structure within the P-type electrode area and the N-type ohmic contact metal area within the N-type electrode area;

removing the first mask layer to expose the top surface of the protrudent area of the ridge structure within the P-type electrode area and the N-type ohmic contact metal area within the N-type electrode area;

forming a first conductive layer over the exposed N-type ohmic contact metal area; and

forming a second conductive layer over the top surface of the protrudent area, wherein the second conductive layer fully contacts the top surface of the protrudent area.

Claim 9. (original) The method of claim 8, wherein the step of removing a portion of the epitaxial structure comprises performing a reactive ion etching operation.

Claim 10. (original) The method of claim 8, wherein the gaseous etchant used in

the reactive ion etching operation comprise argon, method, chlorine and helium ($Ar/CH_4/Cl_2/He$).

Claim 11. (original) The method of claim 8, wherein the material constituting the insulating layer comprises silicon oxide.

Claim 12. (original) The method of claim 8, wherein the step of removing the first mask layer comprises etching the epitaxial structure with a boiling mixture of nitric acid and hydrochloric acid solution.

Claim 13. (original) The method of claim 8, wherein the material constituting the first mask layer, the second mask layer and the third mask layer is selected from a group consisting of silicon nitride, silicon oxide, metal, single photoresist layer, multi-layered structure and various combinations of the above.

Claim 14. (original) The method of claim 8, wherein after forming the second conductive layer over the top surface of the protrudent area, further comprises forming a metallic layer over the epitaxial structure to cover the first conductive layer and the second conductive layer.

Claim 15. (original) The method of claim 8, wherein the material constituting the mask layer comprises nickel.

Claim 16. (original) The method of claim 8, wherein the material constituting the first conductive layer comprises N-type titanium/aluminum/titanium/gold.

Claim 17. (original) The method of claim 8, wherein the material constituting the conductive layer comprises P-type nickel/gold.

Claims 18-30 (canceled)